

CLAIM AMENDMENTS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) ~~Method for~~ A method of processing images compressed using block based compression, comprising:
 - determining whether two blocks are neighboring blocks;
 - determining whether the two neighboring blocks are both subdivided, if it is determined that the two blocks are neighboring blocks; and
 - performing deblocking filtering on one or more edge pixels of the two neighboring blocks, ~~if it is determined~~ after determining that both of the two neighboring blocks are not subdivided.
2. (Original) The method of claim 1, wherein determining whether two neighboring blocks are both subdivided comprises:
 - obtaining variance values of each of the two neighboring blocks; comparing the variance values to a first threshold; and
 - determining whether the two neighboring blocks are both subdivided based upon the comparison of the variance values to the first threshold.
3. (Original) The method of claim 1, wherein determining whether two neighboring blocks are both subdivided comprises:
 - obtaining a block size assignment value; and
 - using the block size assignment value to determine whether the two neighboring values are subdivided.

4. (Currently Amended) The method of claim 1, further comprising:
determining whether one of the two neighboring blocks is subdivided, if both of the two neighboring blocks are not subdivided;
using a first deblocking filter on one or more edge pixels of the two neighboring blocks if one of the two neighboring blocks is subdivided; and
using a second deblocking filter on one or more edge pixels of the two neighboring blocks if neither of the two neighboring blocks ~~are~~ is subdivided.
5. (Currently Amended) The method of claim 4, wherein using the second deblocking filter comprises[[:]] using a two point averaging filter on two edge pixels of the two neighboring blocks.
6. (Currently Amended) The method of claim 4, further comprising:
obtaining one or more difference values of one or more edge pixels of the two neighboring blocks, if neither of the two neighboring blocks ~~are~~ is subdivided;
comparing the one or more difference values to a second threshold; and
selecting the second deblocking filter based on the comparison of the one or more difference values to the second threshold.
7. (Currently Amended) The method of claim 6, wherein the obtaining one or more difference values comprises[[:]] obtaining a first order difference between edge pixels of the two neighboring blocks.
8. (Currently Amended) The method of claim 6, wherein the obtaining one or more difference values comprises[[:]] obtaining a second order difference between edge pixels of the two neighboring blocks.

9. (Original) The method of claim 6, wherein obtaining one or more difference values comprises:

obtaining difference values between three edge pixels of the two neighboring blocks; and

wherein selecting the second deblocking filter comprises:

using a Gaussian filter if at least two of the difference values are greater than the second threshold.

10. (Currently Amended) The method of claim 9, wherein using a ~~Gaussian~~ Gaussian filter comprises~~[[:]]~~ using a six point Gaussian filter on six edge pixels of the two neighboring blocks, if the difference values are greater than the second threshold.

11. (Currently Amended) The method of claim 9, wherein using a ~~Gaussian~~ Gaussian filter comprises~~[[:]]~~ using a four point Gaussian filter on four edge pixels of the two neighboring blocks, if two of the difference values are greater than the second threshold.

12. (Currently Amended) The method of claim 9, wherein selecting the second deblocking filter further comprises~~[[:]]~~ using an averaging filter on two edge pixels of the two neighboring blocks if one of the difference values is greater than the second threshold.

13. (Currently Amended) ~~Apparatus for processing~~ An apparatus to process images compressed using block based compression, comprising:

means for determining whether two blocks are neighboring blocks;

means for determining whether the two neighboring blocks are both subdivided, if it is determined that the two blocks are neighboring blocks; and

means for filtering ~~on~~ one or more edge pixels of the two neighboring blocks, ~~if it is determined~~ after determining that both of the two neighboring blocks are not subdivided.

14. (Original) The apparatus of claim 13, wherein the means for determining whether two neighboring blocks are both subdivided comprises:

means for obtaining variance values of each of the two neighboring blocks;
means for comparing the variance values to a first threshold; and
means for determining whether the two neighboring blocks are both subdivided based upon the comparison of the variance values to the first threshold.

15. (Original) The apparatus of claim 13, wherein the means for determining whether two neighboring blocks are both subdivided comprises:

means for obtaining a block size assignment value; and
means for using the block size assignment value to determine whether the two neighboring values are subdivided.

16. (Original) The apparatus of claim 13, further comprising:

means for determining whether one of the two neighboring blocks is subdivided, if both of the two neighboring blocks are not subdivided;
means for using a first deblocking filter on one or more edge pixels of the two neighboring blocks if one of the two neighboring blocks is subdivided; and
means for using a second deblocking filter on one or more edge pixels of the two neighboring blocks if neither of the two neighboring blocks are subdivided.

17. (Currently Amended) The apparatus of claim 16, further comprising:

means for obtaining one or more difference values of one or more edge pixels of the two neighboring blocks, if neither of the two neighboring blocks ~~are~~ is subdivided;
means for comparing the one or more difference values to a second threshold; and
means for selecting the second deblocking filter based on the comparison of the one or more difference values to the second threshold.

18. (Original) The apparatus of claim 17, wherein the means for obtaining one or more difference values comprises:

means for obtaining difference values between three edge pixels of the two neighboring blocks; and

wherein the means for selecting the second deblocking filter comprises: means for using a Gaussian filter if at least two of the difference values are greater than the second threshold.

19. (Currently Amended) The apparatus of claim 18, wherein the means for using a ~~Gaussain~~ Gaussian filter comprises[[:]] means for using a six point Gaussian filter on six edge pixels of the two neighboring blocks, if the difference values are greater than the second threshold.

20. (Currently Amended) The apparatus of claim 18, wherein the means for using a ~~Gaussain~~ Gaussian filter comprises[[:]] means for using a four point Gaussian filter on four edge pixels of the two neighboring blocks, if two of the difference values are greater than the second threshold.

21. (Currently Amended) The apparatus of claim 18, wherein the means for selecting the second deblocking filter further comprises[[:]] means for using an averaging filter on two edge pixels of the two neighboring blocks if one of the difference values is greater than the second threshold.

22-30. (Canceled).

31. (Currently Amended) ~~Apparatus for processing~~ An apparatus to process images compressed using block based compression, comprising:

a processor configured to determine whether two blocks are neighboring blocks and to determine whether the two neighboring blocks are subdivided if it is determined that the two blocks are neighboring blocks; and

a deblocking filter configured to filter ~~[[on]]~~ one or more edge pixels of the two neighboring blocks, ~~if it is determined~~ after determining that at least one of the two neighboring blocks are not subdivided.

32. (Original) The apparatus of claim 31, wherein the processor determines whether two neighboring blocks are divided using block size assignment information.

33. (Original) The apparatus of claim 31, wherein the processor determines whether two neighboring blocks are divided based upon variance values of each block.

34. (New) A method of processing images compressed using block based compression, the method comprising:

determining whether two neighboring blocks of pixels from an image are both subdivided; and
performing deblocking filtering on one or more edge pixels of the two neighboring blocks of pixels, after determining that both of the two neighboring blocks of pixels are not subdivided.

35. (New) The method of claim 34, wherein determining whether two neighboring blocks are subdivided comprises:

determining a size of a first block of pixels of the two neighboring blocks of pixels;
determining a block variance based on pixels of the first block of pixels; and
determining that the first block of pixels is subdivided when the block variance exceeds a threshold value associated with the determined size.

36. (New) The method of claim 34, further comprising:

determining one or more difference values between one or more corresponding edge pixels of the two neighboring blocks of pixels;
when one of the one or more difference values exceeds a threshold value, filtering the edge pixels using an averaging filter; and
when two or more of the one or more difference values exceeds the threshold value, filtering the edge pixels using a Gaussian filter.

37. (New) The method of claim 36, wherein the Gaussian filter comprises an N-point Gaussian filter, wherein N indicates two times a number of the one or more difference values that exceed the threshold value.

38. (New) The method of claim 34, wherein determining whether two neighboring blocks of pixels from an image are subdivided comprises retrieving block size assignment information associated with a first block of pixels, wherein the block size assignment information indicates how the first block of pixels is subdivided.

39. (New) The method of claim 34, further comprising:
when a first block of pixels of the two neighboring blocks of pixels is subdivided,
selecting two neighboring sub-blocks of pixels;
determining whether the two neighboring sub-blocks of pixels are both subdivided; and
performing deblocking filtering on one or more edge pixels of the two neighboring sub-blocks of pixels, when it is determined that both of the two neighboring sub-blocks of pixels are not subdivided

40. (New) The method of claim 39, further comprising:
determining a size of a first sub-block of pixels of the two neighboring sub-blocks of pixels;
determining a sub-block variance based on pixels of the first sub-block of pixels;
determining that the first sub-block of pixels is subdivided when the sub-block variance exceeds a threshold value associated with the determined size.

41. (New) The method of claim 34, further comprising:
obtaining one or more difference values of one or more edge pixels of the two neighboring blocks of pixels;
determining a number of the one-or more difference values that exceed a threshold value;
and
selecting a deblocking filter based on the number.

42. (New) The method of claim 41, wherein selecting the deblocking filter comprises:

selecting a first deblocking filter when the number is equal to 1; and
selecting a second deblocking filter when the number is greater than 1.